



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/575,820

04/13/2006

Steve C. Benesi

SCB0005

5264

498

7590

04/01/2009

JAMES R. CYPHER
405 14TH STREET
SUITE 1607
OAKLAND, CA 94612

EXAMINER

DRODGE, JOSEPH W

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

04/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,820	Applicant(s) BENESI, STEVE C.	
	Examiner Joseph W. Drodge	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/28/2007</u> . | 6) <input type="checkbox"/> Other: ____. |

The text of the Office Action constitutes a modified and edited version of the Written Opinion document within the prosecution of the parent PCT application (PCT/US2004/018644).

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The various means plus function clauses in claims 1,4,5,11-13 are considered to meet the requirements under 35 U.S.C. 112, 6th paragraph. However, the instant Specification does not provide or suggest the metes and bounds of the individual means plus function clauses, or describe specific structural components. There is no description in the Specification of what specific apparatus are encompassed by "means for moving", "means for performing pretreatment procedures, "means for controlling...", "means for sensing...".

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Art Unit: 1797

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-21 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 7,011,741. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims and claims of '741 commonly concern slurry filtration pressure apparatus with pressure filters comprising cavity or chamber defined by lower and upper plates and movable filter media with means to introduce and withdraw fluids, and also means to sense temperature and/or pressure with corresponding control means.

Claims 1-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14 of copending Application No. 10/504,608. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims and claims of '741 commonly concern slurry filtration pressure apparatus with pressure filters comprising cavity or chamber defined by lower and upper plates and movable filter media with means to introduce and withdraw fluids, and also means to sense temperature and/or pressure with corresponding control means.

Art Unit: 1797

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benesi patent 6,159,359 in view of Benesi patent 5,462,677 and Thogho et al patent 5,382,356.

Benesi '359 discloses a pressure filter apparatus 26 comprising upper plates 44, lower

Art Unit: 1797

plates 45 having cavities, filter media (column 4, line 61), the filter adapted to seal and pressurize (column 1, lines 50-59), plates being movable (column 1, lines 55-59), media moving means (column 6, lines 48-54), means to introduce fluids into the pressure chamber (column 7, lines 5-9), means to drain or withdraw fluids from the filtering chamber that have passed through the filter media and lower plate (column 6, lines 12-16; also see column 4, lines 32-34 and column 5, lines 60-63), slurry sources 50 and means to sense pressure in the chamber (column 7, lines 10-14). Also disclosed are controller means to control pretreatment, plate opening/closing, filter media movement and introduction of fluids (column 5, lines 23-33).

The claims firstly differ in requiring a plurality of pretreatment means. However, to have modified the apparatus of '359 by providing such pretreatment means would have been obvious and not have constituted an inventive step, since Benesi '677 teaches at column 8, lines 16-45 to include chemical addition pretreatments upstream of similar filter press to '677 in order to more efficiently dewater the sludge; and since, Thogho et al teach at column 3, lines 3-21 to have pretreatment with coagulants and other conditioners to reduce the water content of slurry being dewatered in a belt filter press (column 5, lines 50-55) and minimize capillary suction.

The claims secondly differ in requiring means for analyzing characteristics of the slurry. Thogho teaches such slurry analysis means (column , lines 28-45; column 5, lines 56-60 etc.), in combination with means for adding coagulant in controlled amounts to the filter press, so as to result in formation of a consolidated filter cake that is readily removed from the filter. It would have been obvious to the skilled artisan in the filtration endeavors, to have augmented the Benesi filtration system, with the controlled coagulant addition and accompanying slurry

Art Unit: 1797

analyzing means of Thogho, so as to optimize formation of filter cake and thus optimize solids or filter cake separation from the fluids and filtrate (summarized at column 3, lines 22-35).

The claims also differ in requiring means to sense temperature in the pressure chamber, Benesi '359 already sensing pressure in such chamber (column 7). However, to have modified the '359 apparatus by providing such temperature sensing would not have constituted an inventive step, since '677 at column 6, lines 14-19, teaches to sense and control chamber temperature to optimize the effect of the pretreatment chemicals.

For claim 2, see '677 at column 8, lines 1-5 and 8-10 for chemical addition to include pH adjusting chemicals and addition of polymers.

For claim 3, '359 teaches at column 7, lines 5-9 to add material to the closed press filter.

For claim 4, '359 discloses feedback means at column 7, lines 39-48.

For claim 5, cake formation control is disclosed by '359 at column 7, lines 8-9 and 44-48.

For claim 6, '359 adds pressurized fluids at column 7, line 6.

For claims 7 and 8, see discussion of steam or compressed gas at column 7, lines 22-24.

For claims 9 and 10 '359 discloses pressure reduction means at column 7, lines 38-39.

For claim 11, recycling and conservation of heat is conventional in most slurry treatment industries.

For claim 12, '677 suggest slurry recycle at column 1, lines 34-37, etc.

For claim 13 the spray heads 67 of '677 are effective to promote mixing.

For claims 14 and 15, although the specific fluids/chemicals are not shown by the reference, these claims do not introduce any structure into the apparatus.

Claims 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thogho et al patent 5,382,356 in view of Benesi patent 6,159,359 and Benesi patent 5,462,677.

Thogho et al discloses operation of a pressure filter to separate liquid from solids in slurries or sludges (column 5, lines 49-55), analyzing of slurry characteristics at column 5, lines 56-57 and column 13, lines 18-24, control of temperature, chemical characteristic (conductivity) and viscosity by controlled additions of coagulant (column 13, lines 18-30 and column 14, lines 43-64). Also disclosed or inferred are the filter being of the type to include a porous support (see column 5, lines 53-55 “a filter press...a belt press type filter”).

The claims differ in requiring introduction of fluids into the pressure treatment chamber to treat the slurry by washing or formation or altering of a formed filter cake. Benesi '359 teaches at column 5, lines 23-29 to wash press filter surfaces to remove filter cake. It would have been obvious to have added such fluid introduction step to Thogho et al, since Thogho teaches (column 5, lines 62-68) teaches to add coagulant fluids in the form of a solution to a press filter in order to effect eventual removal of solids from the filter surfaces, thus constituting a form of 'washing' of the filter surface, to achieve accelerated liquid/solid separation.

The claims secondly differ in requiring the chamber pressure being controlled. However, to have augmented the Thogho et al method to have such pressure control, would not have constituted an inventive step, since '359 teaches at column 5, lines 38-43 and column 7, lines

Art Unit: 1797

10-14 to control pressure in the filter chamber to minimize cycle times and optimize slurry characteristics.

The claims lastly differ in requiring repeating method steps by recycling slurry. However, to have added such slurry recycling and reprocessing steps to the method of Thogho et al would not have constituted an inventive step, since '677 teaches or suggests at column 3, lines 1-6 and 34-36 and column 7, lines 39-44 to more thoroughly process or dewater the slurry or to simply conserve raw materials.

For claims 17 and 19, '359 teaches programming and feedback aspects of a controller at column 7, lines 39-48, and introduction of steam or compressed gas at column 7, lines 22-24.

For claim 20, Thogho et al disclose temperature control of the slurry feed, hence inherently of slurry in the pressure filter downstream, at column 6, lines 16-19.

For claim 21, see discussion of diaphragms being known in pressure filters at column 3, lines 38-43.

For claim 18, heat recycling is conventional with most industrial processes for purposes of energy conservation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at his direct government telephone number of 571-272-1140. The examiner can normally be reached on Monday-Friday from approximately 8:30 AM to 12:30 PM and 2:00 PM to 6:00 PM.

Art Unit: 1797

Additionally, the examiner's supervisor, Duane Smith, of Technology Center Unit 1797, can be reached at 571-272-1166.

The formal facsimile phone number, for official, formal communications, for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD
3/30/2009
/Joseph W. Drodge/
Primary Examiner, Art Unit 1797